

**IN THE CLAIMS:**

Please cancel claims 1-22 and add new claims 23-62 as follows:

--23. A composition for the oxidation dyeing of keratinous fibers comprising:

(a) at least one enzyme of the laccase type;

(b) at least one alkalizing agent chosen from:

(i) basic amino acids;

(ii) compounds of the following formula (A):

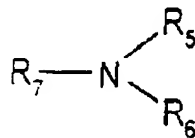


wherein n is equal to 1 or 2; X is chosen from K, Li and  $N^+R_1R_2R_3R_4$

wherein  $R_1$ ,  $R_2$ ,  $R_3$ , and  $R_4$ , which are identical or different, are each chosen from  $C_1$ - $C_4$  alkyl groups,  $C_1$ - $C_4$  monohydroxyalkyl groups and  $C_2$ - $C_4$  polyhydroxyalkyl groups when  $n=1$ ; or

X is chosen from Mg and Ca when  $n=2$ ;

(iii) compounds of the following formula (B):



wherein  $R_5$  is chosen from hydrogen groups,  $C_1$ - $C_6$  alkyl groups,  $C_1$ - $C_6$  monohydroxyalkyl groups, and  $C_2$ - $C_6$  polyhydroxyalkyl groups;

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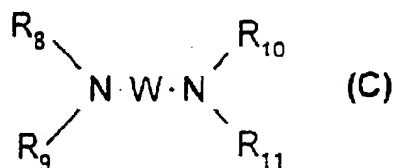
$R_6$  and  $R_7$ , which are identical or different, are each chosen from hydrogen groups,  $C_1$ - $C_6$  alkyl groups,  $C_1$ - $C_6$  monohydroxyalkyl groups, and  $C_2$ - $C_6$  polyhydroxyalkyl groups;

with the proviso that  $R_5$ ,  $R_6$ , and  $R_7$  are not simultaneously chosen from  $C_2$   $\beta$ -hydroxyalkyl groups;

with the additional proviso that if  $R_6$  and  $R_7$  are simultaneously chosen from H, then  $R_5$  is not chosen from  $C_2$  monohydroxyalkyl groups and branched  $C_4$  monohydroxyalkyl groups;

and with the additional proviso that if  $R_5$  is chosen from H and  $C_1$ - $C_6$  alkyl groups and simultaneously  $R_6$  is chosen from  $C_1$ - $C_6$  alkyl groups, then  $R_7$  is not chosen from H and  $C_1$ - $C_6$  alkyl groups; and

(iv) compounds of the following formula (C):



wherein W is chosen from propylene groups optionally substituted with a substituent chosen from hydroxyl groups and  $C_1$ - $C_4$  alkyl groups;  $R_8$ ,  $R_9$ ,  $R_{10}$  and  $R_{11}$ , which are identical or different, are each chosen from hydrogen groups,  $C_1$ - $C_4$  alkyl groups and  $C_1$ - $C_4$  hydroxyalkyl groups; and

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(c) at least one oxidation dye with the proviso that said at least one oxidation dye is not chosen from autooxidizable indole dyes.

24. A composition according to Claim 23, wherein said at least one enzyme of the laccase type is chosen from laccases of plant origin, animal origin, fungal origin, and bacterial origin and laccases obtained by biotechnology.

25. A composition according to Claim 23, wherein said at least one enzyme of the laccase type is chosen from those produced by plants performing chlorophyll synthesis.

26. A composition according to Claim 23, wherein said at least one enzyme of the laccase type is chosen from those extracted from plants chosen from Anacardiaceae, Podocarpaceae, Rosmarinus off., Solanum tuberosum, Iris sp., Coffea sp., Daucus carota, Vinca minor, Persea americana, Catharethus roseus, Musa sp., Malus pumila, Ginkgo biloba, Monotropa hypopithys, Aesculus sp., Acer pseudoplatanus, Prunus persica and Pistacia palaestina.

27. A composition according to Claim 23, wherein said at least one enzyme of the laccase type is chosen from those derived from fungi chosen from Pyricularia orizae, Polyporus versicolor, Rhizoctonia praticola, Rhus vernicifera, Scytalidium, Polyporus pinsitus, Myceliophthora thermophila, Rhizoctonia solani, Trametes versicolor, Fomes fomentarius, Chaetomium thermophile, Neurospora crassa, Coriolus versicol, Botrytis cinerea, Rigidoporus lignosus, Phellinus noxius, Pleurotus ostreatus, Aspergillus nidulans, Podospora anserina, Agaricus bisporus, Ganoderma lucidum, Glomerella cingulata, Lactarius piperatus, Russula delica,

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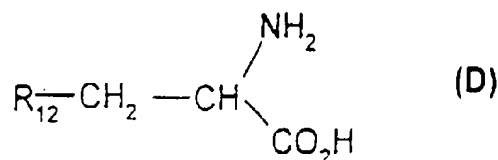
Heterobasidion annosum, Thelephora terrestris, Cladosporium cladosporioides, Cerrena unicolor, Coriolus hirsutus, Ceriporiopsis subvermispora, Coprinus cinereus, Panaeolus papilionaceus, Panaeolus sphinctrinus, Schizophyllum commune, Dichomitius squalens and variants of all said fungi.

28. A composition according to Claim 23, wherein said at least one enzyme of the laccase type is present in a quantity ranging from 0.5 to 2000 lacu units per 100 g of said composition.

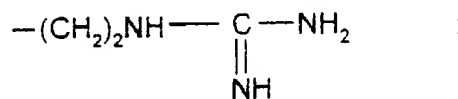
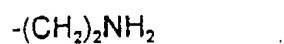
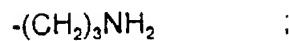
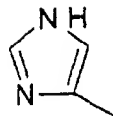
29. A composition according to Claim 23, wherein said at least one enzyme of the laccase type is present in a quantity ranging from 1000 to  $4 \times 10^7$  u units per 100 g of said composition.

30. A composition according to Claim 23, wherein said at least one enzyme of the laccase type is present in a quantity ranging from 20 to  $2 \times 10^6$  ulac units per 100 g of said composition.

31. A composition according to Claim 23, wherein said basic amino acids are chosen from the following formula (D):



wherein  $\text{R}_{12}$  is chosen from:



32. A composition according to Claim 23, wherein said compounds of formula (B) are chosen from diethanolamine, monoisopropanolamine, diisopropanolamine, triisopropanolamine, 2-amino-2-methyl-1,3-propanediol,

2-amino-2-ethyl-1,3-propanediol, 2-amino-1-n-butanol, 1-diethylamino-2,3-propanediol, tris(hydroxymethyl)aminomethane and ethylmonoethanolamine.

33. A composition according to Claim 23, wherein said at least one alkalinizing agent is present in a quantity ranging from 0.001% to 20% by weight relative to the total weight of said composition.

34. A composition according to Claim 33, wherein said at least one alkalinizing agent is present in a quantity ranging from 0.01% to 5% by weight relative to the total weight of said composition.

35. A composition according to Claim 34, wherein said at least one alkalinizing agent is present in a quantity ranging from 0.05% to 3% by weight relative to the total weight of said composition.

36. A composition according to Claim 23, wherein said at least one oxidation dye is at least one oxidation base chosen from ortho- and para-phenylenediamines, ortho- and para-aminophenols, heterocyclic bases, and the acid addition salts of all said oxidation bases.

37. A composition according to Claim 36, wherein said at least one oxidation base is present in a concentration ranging from 0.0005% to 12% by weight relative to the total weight of said composition.

38. A composition according to Claim 37, wherein said at least one oxidation base is present in a concentration ranging from 0.005% to 6% by weight relative to the total weight of said composition.

39. A composition according to Claim 36, wherein said acid

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addition salts are chosen from hydrochlorides, hydrobromides, sulphates, tartrates, lactates and acetates.

40. A composition according to Claim 23, wherein said at least one oxidation dye is at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols, heterocyclic couplers and the acid addition salts of all said couplers.

41. A composition according to Claim 40, wherein said at least one coupler is chosen from 2-methyl-5-aminophenol, 5-N-( $\beta$ -hydroxyethyl)amino-2-methylphenol, 3-aminophenol, 1,3-dihydroxybenzene, 1,3-dihydroxy-2-methylbenzene, 4-chloro-1,3-dihydroxybenzene, 2,4-diamino-1-( $\beta$ -hydroxyethyloxy)benzene, 2-amino-4-( $\beta$ -hydroxyethylamino)-1-methoxybenzene, 1,3-diaminobenzene, 1,3-bis(2,4-diaminophenoxy)propane, sesamol,  $\alpha$ -naphthol, 6-hydroxyindole, 4-hydroxyindole, 4-hydroxy-N-methylindole, 6-hydroxyindoline, 2,6-dihydroxy-4-methylpyridine, 1-H-3-methylpyrazol-5-one, 1-phenyl-3-methylpyrazol-5-one, 2,6-dimethylpyrazolo[1,5-b]-1,2,4-triazole, 2,6-dimethyl[3,2-c]-1,2,4-triazole, 6-methylpyrazolo[1,5-a]benzimidazole and the acid addition salts of all said couplers.

42. A composition according to Claim 40, wherein said at least one coupler is present in a concentration ranging from 0.0001% to 10% by weight relative to the total weight of said composition.

43. A composition according to Claim 42, wherein said at least one

coupler is present in a concentration ranging from 0.005% to 5% by weight relative to the total weight of said composition.

44. A composition according to Claim 40, wherein said acid salts are chosen from hydrochlorides, hydrobromides, sulphates, tartrates, lactates and acetates.

45. A composition according to Claim 23, further comprising at least one direct dye.

46. A composition according to Claim 45, wherein said at least one direct dye is chosen from nitro, azo and anthraquinone dyes.

47. A composition according to Claim 23, further comprising at least one carrier appropriate for keratinous fibers.

48. A composition according to Claim 47, wherein said at least one carrier is chosen from water and at least one organic solvent.

49. A composition according to Claim 48, wherein said at least one organic solvent is present in a concentration ranging from 1% to 40% by weight relative to the total weight of said composition.

50. A composition according to Claim 49, wherein said at least one organic solvent is present in a concentration ranging from 5% to 30% by weight relative to the total weight of said composition.

51. A composition according to Claim 23, having a pH from about 4 to about 11.

52. A composition according to Claim 51, wherein said pH varies



from about 6 to about 9.

53. A composition according to Claim 23, further comprising at least one suitable cosmetic adjuvant chosen from surfactants, polymers, thickeners, antioxidants, enzymes different from said at least one enzyme of the laccase type as defined in Claim 23, penetrating agents, sequestering agents, perfumes, dispersing agents, film-forming agents, screening agents, vitamins, preservatives and opacifying agents.

54. A composition according to Claim 23 in the form of an aqueous or aqueous/alcoholic lotion, a gel, a milk, a cream, an emulsion, a thickened lotion or a thickened foam.

55. A composition according to Claim 23, wherein said composition is ready-to-use.

56. A composition according to Claim 23, wherein said keratinous fibers are human keratinous fibers.

57. A composition according to Claim 56, wherein said human keratinous fibers are hair.

58. A method of dyeing keratinous fibers comprising applying to said keratinous fibers for a sufficient time to develop a desired color at least one dyeing composition comprising:

- (a) at least one enzyme of the laccase type;
- (b) at least one alkalizing agent chosen from:
  - (i) basic amino acids;

(ii) compounds of the following formula (A):

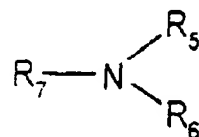


wherein n is equal to 1 or 2; X is chosen from K, Li and  $N^+R_1R_2R_3R_4$

wherein  $R_1$ ,  $R_2$ ,  $R_3$ , and  $R_4$ , which are identical or different, are each chosen from  $C_1$ - $C_4$  alkyl groups,  $C_1$ - $C_4$  monohydroxyalkyl groups and  $C_2$ - $C_4$  polyhydroxyalkyl groups when  $n=1$ ; or

X is chosen from Mg and Ca when  $n=2$ ;

(iii) compounds of the following formula (B):



wherein  $R_5$  is chosen from hydrogen groups,  $C_1$ - $C_6$  alkyl groups,  $C_1$ - $C_6$  monohydroxyalkyl groups, and  $C_2$ - $C_6$  polyhydroxyalkyl groups;

$R_6$  and  $R_7$ , which are identical or different, are each chosen from hydrogen groups,  $C_1$ - $C_6$  alkyl groups,  $C_1$ - $C_6$  monohydroxyalkyl groups, and  $C_2$ - $C_6$  polyhydroxyalkyl groups;

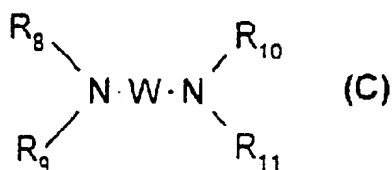
with the proviso that  $R_5$ ,  $R_6$ , and  $R_7$  are not simultaneously chosen from  $C_2$   $\beta$ -hydroxyalkyl groups;

with the additional proviso that if  $R_6$  and  $R_7$  are simultaneously chosen from H, then  $R_5$  is not chosen from  $C_2$  monohydroxyalkyl groups and branched  $C_4$  monohydroxyalkyl groups;

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and with the additional proviso that if  $R_5$  is chosen from H and  $C_1-C_6$  alkyl groups and simultaneously  $R_6$  is chosen from  $C_1-C_6$  alkyl groups, then  $R_7$  is not chosen from H and  $C_1-C_6$  alkyl groups; and

(iv) compounds of the following formula (C):



wherein W is chosen from propylene groups optionally substituted with a substituent chosen from hydroxyl groups and  $C_1-C_4$  alkyl groups;  $R_8$ ,  $R_9$ ,  $R_{10}$  and  $R_{11}$ , which are identical or different, are each chosen from hydrogen groups,  $C_1-C_4$  alkyl groups and  $C_1-C_4$  hydroxyalkyl groups; and

(c) at least one oxidation dye with the proviso that said at least one oxidation dye is not chosen from autooxidizable indole dyes.

59. A method of dyeing keratinous fibers according to Claim 58, wherein said keratinous fibers are human keratinous fibers.

60. A method of dyeing keratinous fibers according to Claim 59, wherein said human keratinous fibers are hair.

61. A method for dyeing keratinous fibers comprising the steps of:

- (a) storing a first composition,
- (b) storing a second composition separately from said first composition,

(c) mixing the first composition with the second composition to form a mixture, and  
(d) applying said mixture to said keratinous fibers for a time sufficient to achieve a desired colouration,

wherein said first composition comprises said at least one oxidation dye in a medium appropriate for keratinous fibers, and

wherein said second composition comprises said at least one enzyme of the laccase type and said at least one alkalinizing agent in a medium appropriate for keratinous fibers.

62. A multicompartment device or a dyeing kit, comprising a first compartment containing a composition (A) comprising, in a medium appropriate for dyeing, at least one oxidation dye and a second compartment containing a composition (B), comprising, in a medium appropriate for keratinous fibers, at least one enzyme of the laccase type, wherein at least one of said composition (A) and composition (B) comprises at least one alkalinizing agent chosen from:

- (i) basic amino acids;
- (ii) compounds of the following formula (A):



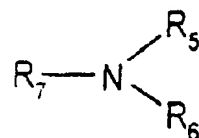
wherein n is equal to 1 or 2; X is chosen from K, Li and  $N^+R_1R_2R_3R_4$

wherein  $R_1$ ,  $R_2$ ,  $R_3$ , and  $R_4$ , which are identical or different, are each

chosen from C<sub>1</sub>-C<sub>4</sub> alkyl groups, C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl groups and  
C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl groups when n=1; or

X is chosen from Mg and Ca when n=2;

(iii) compounds of the following formula (B):



wherein R<sub>5</sub> is chosen from hydrogen groups, C<sub>1</sub>-C<sub>6</sub> alkyl groups, C<sub>1</sub>-C<sub>6</sub>  
monohydroxyalkyl groups, and C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl groups;

R<sub>6</sub> and R<sub>7</sub>, which are identical or different, are each chosen from hydrogen  
groups, C<sub>1</sub>-C<sub>6</sub> alkyl groups, C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl groups, and C<sub>2</sub>-C<sub>6</sub>  
polyhydroxyalkyl groups;

with the proviso that R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> are not simultaneously chosen from C<sub>2</sub>  
β-hydroxyalkyl groups;

with the additional proviso that if R<sub>6</sub> and R<sub>7</sub> are simultaneously chosen from H, then  
R<sub>5</sub> is not chosen from C<sub>2</sub> monohydroxyalkyl groups and branched C<sub>4</sub>  
monohydroxyalkyl groups;

and with the additional proviso that if R<sub>5</sub> is chosen from H and C<sub>1</sub>-C<sub>6</sub> alkyl groups